

Notice of Allowability

Application No.

09/918,253

Examiner

Jean M Corrielus

Applicant(s)

MA ET AL.

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to July 2, 2004.
2. ☒ The allowed claim(s) is/are 1-9, 11-27 and 29-38 renumbered as 1-36.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

JEAN M. CORRIELUS
PRIMARY EXAMINER

DETAILED ACTION

1. This office action is in response the amendment filed on July 02, 2004, in which claims 1-9, 11-27 and 29-38 are presented for further consideration.

Allowable Subject Matter

2. The present application has been thoroughly reviewed. Upon searching a variety of databases, the examiner respectfully submits that claims 1-9, 11-27 and 29-38 are allowable in light of the applicants' argument and in light of the prior art made of record.

Reasons For Indicating Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: The claimed invention is directed toward mutual dependence and thus is able to consider interactions, e.g., more just a one way relationship (see specification page 7, lines 22-page 8, line 5) in contrary to Kitts, which is disclosed a conditional independence wherein such conditional independence is a one way relationship. The specification page 7, line 22-page 8 line 5 discloses if a part of an m-pattern occurs, it is likely, to a high probability, that the other part of the m-pattern will be seen. Kitts, on the other hand, states, if we assume mutual independence between products, then the expected profit after buying a product a is equal to the probability of buying b given a, $\Pr(b/a)$ multiplied by the profit Π of b. this idea behind incremental profit is to maximize the profit minus the profit you would expect to receive due to the natural course of customer's purchasing. However, Kitts either singularly or in combination, fail to anticipate or render obvious the recited features "identifying sets of items in the input data set as mutual dependence patterns based on respective

Art Unit: 2172

comparisons of conditional probability values associated with each of the sets of items to a predetermined mutual dependence threshold value” in claim 1; “identifying a set of items in the input data set, which includes at least two subsets of at least one item, as a pattern when the set of items has a conditional probability value computed therefor that is not less than a predetermined threshold value, wherein the conditional probability value is indicative of a probability that both of the at least two subsets of at least one item will occur given that one of the at least two subsets of at least one item has occurred” in claim 2 and 20; “identifying one or more sets of items in the input data set as one or more patterns based on respective comparisons of conditional probability values associated with each of the sets of items to a predetermined mutual dependence threshold value” in claim 3; --identifying a set of items in the input data set as a pattern when the set of items has a conditional probability value computed for the set of items minus a particular item of the set, given the particular item of the set, that is not less than a predetermined threshold value—in claim 5, 16, 23 and 34; and “searching the input data set of items to identify sets of items in the input data set as mutual dependence patterns based on respective comparisons of conditional probability values associated with each of the sets of items to a predetermined mutual dependence threshold value” in claim 9. These features, in conjunction with all other limitations of the dependents and independent claim renders claim 1-9, 11-27 and 29-38 allowable.

Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities

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Art Unit: 2172

remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for allowance."

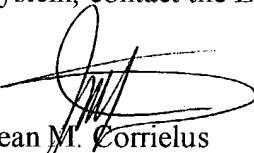
Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean M. Corrielus whose telephone number is (703) 306-3035.

The examiner can normally be reached on Monday - Friday (12:00pm - 7:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean M. Corrielus
Patent Examiner
August 6, 2004

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